

MCARES

**MONROE COUNTY
ARES/RACES**

**ARES/RACES
Radio Operators Guide**

The purpose of this document is to serve as a basic guide for you, the MCARES member. It is a collection of information, most of it has been collected from other ARES/RACES groups from across the nation. This information has been molded to fit the needs of our group serving in Monroe County Pennsylvania. This is required reading for all ARES/RACES members, however it is no substitute for training and practice. It can not answer all questions you may have during an activation or drill and is not intended to do so. It is simply an outline of what to expect during an MCARES activation or drill. At any time while on duty in the field during an activation, drill, or any other MCARES event, if you have a question or need advice ask MCARES leadership or your NCS for further guidance.

The Basics – Who We Are, What We Do, And Your Role in MCARES

First, THANK YOU for stepping up to serve your community as an Emergency Communicator! Your contribution of your skills and equipment is of great value and is appreciated.

The ARES/RACES Volunteer's Duties

The individual ARES team member provides emergency communications under adverse conditions. To prepare for this assignment the ARES member should attempt to avail him or herself of all training opportunities, gather and prepare his or her equipment for extended field use, and practice traffic handling and net operations. There is an implied commitment that an ARES team member will try to make him or herself and his or her equipment available during disaster situations. This is not to say that this obligation should come before work or family. Simply put, you cannot help others until your own house is in order.

Safety as an ARES/RACES Volunteer

We stressed the importance of taking your safety as your own responsibility. There are several aspects to conducting yourself in a safe manner. The first step you can take is to be adequately trained. One way to extend your training is to take classes offered by other agencies. For example, The Red Cross offers classes in First Aid, CPR, etc. throughout most of the year. Any of these classes will enhance your own safety because you'll be more aware of how to take care of yourself. However no matter what training you may receive, it is still important to remember that you should only wear one hat during an ARES/RACES operation. You are there as a communicator, not a first aid provider, or a firefighter. This help avoid confusion about your role, and will prevent you from putting yourself into unsafe situations.

As you're working an emergency, you need to keep yourself aware of what is occurring around you. This is the only way you can expect to see a dangerous situation before it surrounds you! Keep your eyes open and your brain on full alert! Stay situationally aware. Safety is just as important at home. You should ensure that all is well at home before responding to an emergency. This allows you to keep your mind on the situation and task at hand instead of worrying about your family and home.

Who does MCARES help?

MCARES serves several agencies and each of these served agencies has different needs and expectations of MCARES. Due to these varied requirements, MCARES and its members need to maintain a diverse set of capabilities to support our different missions.

When working with local governments, ARES/RACES teams may work with Police and Fire officials. Our missions might include supplementing city communications capability by setting up a station at an Emergency Operations Center (EOC), dispatching shadows with city executives, or providing communications between the EOC and various field locations.

At the county level ARES/RACES interacts with the county Office of Emergency Services. ARES/RACES might be asked to provide EOC to EOC communications links, communications between the county seat and city EOCs, or communications to state government entities.

There is also a "Memorandum of Understanding" (MOU) between the American National Red Cross and the ARRL that establishes a cooperative environment between the two organizations. Under the authority of this agreement, ARES/RACES provides needed communications on the Red Cross's behalf. This might entail shadow duty, shelter communications, or providing other technical assistance.

MCARES Alert and Activation Procedures

1. MCARES members will be alerted by one or more of the following methods.
 - a.) Alert by SMS text messages and/or email using the MCARES member database. If the alert message requests a reply confirmation, MCARES members will reply to the alert message with their call sign. If no reply is received, it is assumed the contact by SMS/Email was not received and a phone contact will be attempted.
 - b.) Alert by telephone. If SMS/Email is unavailable, activation of the Phone Tree will occur.
 - c.) If alerting is unavailable through SMS, Email or Telephone (*Comm Failure*) MCARES members will monitor the primary/secondary ARES repeaters for instructions. If the ARES repeater systems are down monitor the 147.420 MHz simplex frequency for instruction.

MCARES Emergency Activation Levels

- (GREEN) LEVEL ZERO – No Emergency: Normal everyday operations. No emergency or precipitating conditions exist.
- (YELLOW) LEVEL ONE – Awareness/Monitoring Phase: A potential for a communication emergency exists. All Monroe County ARES members should monitor local repeaters, text messaging, and email for information. MCARES members should start preliminary preparedness actions for activation and possible deployment. (Check “Go Kits” and supplies, charge batteries, fuel vehicles)
- (ORANGE) LEVEL TWO – Standby: An unusual condition or emergency exists that has caused government officials to declare an alert or warning. A communications emergency does not exist but is likely. Monroe County ARES may initiate a resource net. All members should monitor the 146.865 repeater. ARES Members should make all final preparations for possible activation. Members who are available should check into the resource net and state their availability and resources. When feasible, the resource net control will communicate and accept check-ins via email and text messaging (such as those at work) as well as those on the radio.
- (RED) LEVEL THREE - Activation: -- A communication emergency exists, and volunteer operators and radio resources have been requested by one or more served agencies in Monroe County, or a mutual aid request has been received from another county. If a resource net has not been activated (see level two, above), one will be activated now. Once available resources have been determined, further instructions will be given on the resource net frequency; one or more other nets may be activated to give instructions for deployment and for field operations.
- (BLUE) LEVEL FOUR – Deactivation: -- After the Emergency has terminated ARES members are released by served agencies and the EC. After all stations are secured and safely home, the EC will return the readiness level to Condition Green. AEC's and EC will conduct an after action review within 72 hours of event termination. EC will prepare and submit after action reports.

1. Alerts will be issued by the District Emergency Coordinator (DEC), Emergency Coordinator (EC), Assistant Emergency Coordinator (AEC) or a designated Net Control Operator.
2. MCARES operators should check in to the Resource Net as soon as possible when requested with their status and general location.

Your status should be given as one of the following.

- a) Ready and available for deployment service assignment
 - b) Not available for deployment, but can send and receive messages for my location.
 - c) In Need of Assistance.
 - d) Not available for service, monitor only.
3. The Net Control Station (NCS) will follow-up with stations in need of assistance first, then advise of current information available about the event.
 4. When requested by the NCS, operators should report any pertinent information occurring at their location. Please wait for the NCS to request this information.
 5. Should a Served Agency request operators, the DEC, EC, or AEC will instruct the NCS to deploy available operators to an assigned location and give the MCARES deployment class.
DO NOT SELF-DEPLOY!

MCARES Deployment Classes

Class A Deployment Description:

Activation is local in nature, with less than 12 hour deployment expected.

- Deployment either mobile or portable.
- ARES repeater infrastructure is functional.
- Momentary loss of cell network may be possible or unavailable.
- Momentary loss of commercial power may be possible or unavailable.

Required equipment: - HT, with extra battery, Mobile rig if necessary, Snack or lunch and hydration, Weather appropriate clothing, Deployment vest/hat, ICS forms in hard copy, ARES/RACES credentials

Class B Deployment Description:

Multiple municipalities or county wide activation in nature. Less than 72hr deployment

- Deployment of mobile/portable ops with ICP/EOC ops.
- Deployment of Shelter ops.
- ARES repeater infrastructure may be on backup power.
- Relay or Mobile/portable X-band repeat function may be necessary.
- Loss of commercial power possible.
- Loss of cell network possible.
- More extensive ICS utilization may be implemented.

Required equipment: -HT and/or Mobile/Portable operation, VHF/UHF go kit for shelter site, Food for multiple meals up to 72hrs, Supply of drinks, Weather appropriate clothing, Deployment vest/hats, Battery/generator backup for comms, ARES/RACES credentials,

Computer and interface for Packet use, ICS forms in hard copy.

Class C Deployment Description:

County wide or regional activation in nature. 72hr deployment.

- Class B deployment equipment, plus HF operations may be needed.
- Deployment beyond 72hrs at shelter site, ICP or EOC.
- ARES repeater infrastructure may be inoperable.
- HF regional may be necessary.
- Loss of cell network likely.
- Loss of commercial power likely.

Required equipment: Battery/generator/solar/inverter backup for comms, HF go kit may be needed, Food and water plan beyond 72 hrs, Weather appropriate clothing/with clean change of clothes, Portable shelter, Deployment vests/hats, ARES/RACES credentials, HT and mobile rigs, portable push up poles with base antennas for DX simplex, Computer and interface for FLdigi and Winlink use, ICS forms in hard copy.

Class D Deployment Description:

National emergency where civil defense/RACES rules are implemented.

- Interoperability with Federal government or Military may be necessary.
- ARESMAT with mutual aid ARES groups integrated in the response.
- Long term operations.
- Deployment of adhoc comms infrastructure at remote sites.
- Working within the ICS/NIMS with COML and COMT assets
- Shadow officials to provide tactical comms.
- Working with ARRL Eastern PA ARES District 2 and the ARRL Eastern PA Section for support.

6. Operators must check-in with the NCS when you arrive and depart your assignment and home.

For large-scale events or drills, Tactical Nets may be established and assigned operators will be directed to the Tactical Net. Do NOT check in to a Tactical Net until directed to do so by the NCS.

WHAT TO DO FIRST IN CASE OF AN EMERGENCY

1. Check that you and your family are safe and secure before you respond as an ARES/ RACES volunteer.
2. Check that your property is safe and secure before you respond as an ARES/RACES volunteer.
3. Monitor the 146.865 WX3OES Repeater and/or the 147.045 WA3MDP as a secondary

Follow the instructions you receive from the ARES/RACES officials in charge on the above frequency, if this is not possible, contact your local emergency coordinator, or his/her designee, for further instructions (remember that in an emergency they may be busy and you may just be asked to stand by for further instructions).

INITIAL ACTION CHECKLIST

The net control station and/or ARES/ RACES officials on the designated emergency net will provide additional instructions, including information on frequencies used for other resource, traffic, and tactical nets. Normally, a resource net will provide information on how you can assist, please standby, and listen. Unless you are asked to check-in, keep the frequency clear.

- Check all equipment, batteries, and supplies.
- Prepare for deployment to assignment with your “GO” kit.
- Initiate personal event log (ICS 214 unit log)
- Enter assigned frequency(s) on log sheet and on emergency/frequency plan.(ICS 205)
- Have log forms to record messages handled. (ICS 214 unit log)
- Have several formal message forms (ICS 213 &, RadioGram)
- Monitor the Net frequency **AT ALL TIMES**. Notify Net Control if you have to leave the Net or change location.

BASIC DEPLOYMENT EQUIPMENT

When responding to an emergency event, or even a training exercise, there is a minimum set of equipment and personal gear you should bring with you to get the job done. Basic items include those listed in the Deployment Class Descriptions.

ONCE YOU HAVE ACCEPTED AN ASSIGNMENT

The net control station and/or ARES/RACES officials on the designated emergency net will provide additional instructions, including information on frequencies used at the location that you will be assigned, your assignment contact, as well as the travel frequency {if needed} to be used while you travel to and from the assigned location. You should have programmed the frequencies listed on the MCARES ICS-217 into your radio, and test these before you leave home. Make entry in your individual event log (ICS 214) when you depart home.

While you are en route to your assignment, you are under the control of Monroe County ARES/RACES. When you depart, call the resource Net and let us know that you are under way. When you get to your assignment, call the Resource Net again and let us know that you have reported to your assigned agency. If your travel time is more than 15 minutes, advise Net control of your status and approximate location. Do this only in 15-minute intervals, or as directed by NCS.

WE MUST BE ABLE TO KEEP TRACK OF YOU – IF YOU DISAPPEAR FROM OUR NET WITHOUT ESTABLISHING CONTACT WITH YOUR ASSIGNMENT, WE WILL HAVE TO ASSUME THAT YOU ARE IN TROUBLE, AND WE WILL HAVE TO BEGIN RESCUE PROCEDURES. SO, DO NOT BECOME PART OF THE PROBLEM – MAKE SURE THAT YOU ARE ALWAYS IN CONTACT WITH THE RESOURCE NETS WHILE TRAVELING TO YOUR ASSIGNMENT!!

NOTE:

*(MCARES members will **not** use flashing blue, red, white, or green lights on vehicles when serving as MCARES volunteers. Use of flashing yellow lights is permitted when vehicles are stationary for the purposes of collision avoidance, when serving as a sag vehicle during a public service event, or in the rare event that a member must drive in severe weather conditions and increased visibility is necessary for safety).*

ONCE YOU HAVE REACHED YOUR ASSIGNED LOCATION

Notify Net Control you have arrived then.....

1. Check in with your assigned contact so the served agency records reflect your help.
2. Note time of arrival on your event log (use ICS 214 unit log).
3. Determine where/when the event/safety briefing will be (ASK!) If none is offered ask for any specific safety issues related to your assignment. Ask who your site supervisor is.
4. Be prepared to operate. Perform your duties in a manner consistent with good safety procedures and good Ham techniques. Provide your supervisor with appropriate status updates and notification of any problems that may arise. Keep an accurate log of your station activities.
5. Obtain tactical call sign if needed for your location/assignment.
6. Enter assigned frequency(s) on log sheet and on emergency/frequency plan (ICS 205)
7. Use log form to record messages handled. (ICS 214 unit log)
8. Use a formal message form when a precise record of the message is required.
9. Use tactical call sign for your location, while observing FCC's ten-minute ID rule.
10. Monitor your assigned frequency **AT ALL TIMES**. Notify NCS if you have to leave for any reason

Once your assignment is complete AND prior to departing you need to:

- Complete your work assignment.
- Brief your subordinates on demobilization
- Complete event paper work
- Brief your replacement as applicable
- Request to secure your station with NCS
- Follow incident check out procedures, check out where you checked in (if at all possible)
- Notify NCS of your departure and notify the NCS upon arrival at your home.

Emergency Communications

Emergency communications are those provided in the event of a disaster or other emergency and they are usually unannounced.

Messages containing information on injuries or deceased shall not be passed over voice circuits but only via digital or other non-voice and secure communication.

Operations

Operations communications are formal messages requiring legal documentation, provided between the various agencies to facilitate the coordination of equipment, personnel and resource requests in support of emergency protective measures, search, rescue and recovery efforts. These shall be in a written (formal) format, as required by the served agency.

Health & Welfare

Health and welfare traffic (precedence W) are messages concerning the welfare of people in the effected area; these can be from people within the effected area to family in another area to let them know they are safe, or it can be inquires from family outside of the effected area. In either case these are low priority and are usually handled after the initial response has been transitioned into recovery operations. In most instances the Red Cross will coordinate these inquiries. During the response phase to disasters send no W traffic into an effected area while any Operations traffic remains listed to be handled.

Digital Communications

Whenever possible digital stations should be established for handling most **non-tactical** traffic, i.e., all welfare requests, logistics & supply requests, damage reports etc. Digital traffic provides more detailed information, is less likely to be misinterpreted, and takes up less air time. In addition it is more difficult for the general public to listen in on digital traffic.

Nets

Nets are established to control the radio traffic on any given frequency. There can be multiple nets in operation for a given disaster, each with a specific purpose, and each with a Net Control Station (NCS). The role of the NCS is vital to the efficient and smooth traffic handling and operation required during a disaster.

Duties of the Net Control Station (NCS)

The main duty of the NCS is to insure the ARES/RACES nets are run in an orderly fashion, and properly documented (ICS 214) to help eliminate confusion on communication networks, provide information regarding the disaster to ARES/RACES member stations, and to coordinate the flow of traffic as required. All traffic shall be written in a message format as deemed fitting by the served agency or department. All messages must carry the name of the person originating the message and their ICS Position or office (example: John Smith, Logistics manager). The NCS is responsible for taking check-ins as needed to meet the needs of the disaster operation and/or ARES/RACES activation requirements.

Traffic shall be categorized by precedence and transmitted as soon as possible, with Emergency and Urgent traffic taking top precedence. The phrase "BREAK" will only be used in an emergency. NCS will recognize emergency traffic immediately and handle the emergency traffic. The NCS shall keep a log of the net and member check-ins. This log will be provided to the supervisor as soon as possible following the conclusion of the shift. Before starting an ARES/RACES net, make sure someone records a list of participating ARES/RACES member stations who are available for deployment and/or assignment. Preferably, this should be performed by the Net Scribe, if no Net Scribe is available the NCS must perform this task.

Role of the NCS:

- The NCS is in charge of the net while the net is in session. He is responsible for controlling who uses the frequency and when they pass traffic.
- NCS must keep track of which resources are on the net and who has cleared the channel. NCS is also responsible for knowing what traffic each person is capable of dealing with.
- In medium and large operations you need to have a backup NCS and a person to log
- Keep a written record of the incident and all traffic passed. This does not mean a copy of all formal traffic, simply an overview of the message (an ICS 214 can be used for this).
- Make ALL instructions clear and concise, **using as few words as possible**.
- Use tactical call signs. If participants do not follow your lead, only recognize those using tactical call signs (obviously this does not apply if they have emergency traffic).

- Different nets may be established for different traffic. Should someone try to pass traffic that should be on another net, refer them to the correct net. Nets can either be “open” or “directed”:

Open Nets

Open nets do not have a Net Control Station and participants follow good amateur practice in taking turns at communicating. Nets for public service communications, such as parades, can usually be an open net.

Directed Net

A directed net has a Net Control Station assigned who controls and “directs” the flow of traffic through the net. Most emergency nets are directed nets. During an emergency it is essential that a NCS is assigned due to the volume of traffic.

Tactical Net

A tactical net is the primary coordination net for the event or for a particular agency being served. These nets should use **tactical call signs**, identifying the location or function of that site; i.e., shelter, fire control, EOC, etc. Amateur call signs are used at the **end of transmissions only**, as required by FCC regulations (traffic should be short and concise and should not exceed the 10 minute rule for identification). The use of tactical call signs prevents confusion when operators change. Tactical call signs will be assigned by net control. These nets are restricted to traffic for the event only.

Resource or Logistics Net

A resource or logistics net is for acquiring volunteers for the event and making assignments for various operators.

Traffic Net

A traffic net is for passing formal (normally written) traffic. These are directed nets and traffic can either be passed on the net frequency or sent off to another frequency. During a disaster there may be more than one traffic net, one may be local and one may be on HF to pass traffic into and out of the effected area. Digital stations should be established to handle welfare traffic.

Admin Net

An admin net can be established to coordinate the response and relief of ARES volunteers, arrange for equipment or other ARES resources to support the function of ARES. This type of net would normally be for the EC and AEC's. If available 70cm repeaters are ideal.

Situation Severity

EMERGENCY--Any message having life and death urgency to any person or group of persons.

URGENT--Any Message involving a threat to property only

OTHER--All other message not involving a threat to life or property

Message Handling

IMMEDIATE—This type of message must be handled as soon as possible without delays

PRIORITY—This type of message should be handled in less than one hour.

ROUTINE—This type of message is handled as the time and situation allow

A message marked as **EMERGENCY** and **IMMEDIATE** should never be put down until after it has been delivered.

SOME POSSIBLE TYPES OF ASSIGNMENTS

Shadow Duty

A Shadow is an amateur radio operator that is providing a communications channel between the person he or she is “shadowing” (also known as the principal) and other stations on the net. You have two duties here — one is to stick like glue to the person you’re shadowing without getting in their way. The second duty is to be prepared to communicate successfully from any place that your assignment might travel. You need to ensure that you have the proper equipment to communicate on behalf of your shadow. As you take the assignment make sure that you ask Resource NCS about any special equipment you might need. Quite often a shadow will have to talk from a moving vehicle as well as be able to move around in the field with the principal. If this is the case then appropriate equipment would include a several watt HT with alkaline batteries, ear phone or ear bud is a must, as well as a mag-mounted antenna that can be placed on the exterior of the vehicle. If the official or principal is expected to travel into very remote areas then a mobile 2m rig with 25 - 50 watts is also appropriate. Powering the larger 2m mobile rig can be tricky so you might also have to provide a 12 to 24 Amp-hour battery if the vehicle doesn’t have a cigarette lighter or power take-off where you might obtain power. The last consideration and perhaps the most substantial is whether you have the appropriate training for the shadow assignment. Inquire with the Resource NCS as you take the assignment about such special circumstances. You should also make the principal you are shadowing aware of your level of training so that you aren’t exposed to dangerous situations. An example might be shadowing the Incident Commander of a wild fire into the field. You should take this type of assignment only if you have had a formal fire line safety class.

Red Cross Operations

Amateurs have a long tradition of helping the Red Cross with their communications needs. In keeping with that tradition the ARRL formalized the relationship between the two organizations by signing a Memorandum of Understanding with Red Cross. In providing communications for Red Cross you are most likely to operate either at a shelter, or at the Red Cross chapter headquarters. There is a different set of considerations for each of these assignments. When operating at a shelter site be aware of what are appropriate communications for amateur frequencies. Any message dealing with logistical or Health and Welfare is appropriate for amateur channels. Keep in mind that amateur frequencies are often monitored by news agencies. Traffic of a sensitive nature should be handled by a more secure communications medium such as the telephone. Equipment requirements for shelter duty may vary depending on whether the net is operating on a repeater or a simplex frequency. You should be prepared to bring blank message forms (ICS 213)

Meals are usually provided at Red Cross shelter sites, so bringing your own food is usually not necessary. When reporting for duty at the shelter, inform the shelter manager or amateur radio site supervisor of your level of training. This is to prevent being assigned a task for which you may not be qualified. If you encounter any medical situations make sure that you notify the appropriate personnel instead of trying to deal with it yourself. Again, your responsibility is communications only.

Red Cross Shadow or Other VIP Shadow

Shadow duty for the Red Cross will usually involve either providing communications for a Red Cross official, or acting as a radio operator for a Red Cross mobile unit such as a mass feeding station. You will probably need both a mobile AND a handheld radio when shadowing a Red Cross official. If you are providing radio capability for a mobile unit a mobile radio system should be adequate. When using a mobile amateur radio in a Red Cross vehicle remember that a

12 Volt source may not be available, and you may need to supply your own power source such as a battery. Mobile unit duty is also likely to be a longer than average shift since you will be operating on the vehicle's shift assignment. It is conceivable to work as long as eight to ten hours on one of these assignments

Duty at an Emergency Operations Center (EOC)

The government operates from an Emergency Operations Center (EOC) during an emergency, staffing the EOC with senior government officials to help administrate the event from one location. EOC's operate according to Incident Command System Guidelines and Procedures (in simplest form, send messages to titles at identified positions, with date, time and degree of urgency notes. Other details about ICS are available from any city manager). The EOC may be in a governmental building, at a police or fire department or other location. Amateur radio resources may also be operated from this location, and an Emergency Coordinator or other ARES/RACES official may operate from here as well.

As an emergency responder you may be asked to be a Net Control Station, a messenger, or a channel monitor. The Net Control Station may be handling one of the nets originating from the EOC. Messengers move traffic between Red Cross or other officials and the EOC, or as spare hands as needed during the shift. The channel monitor position listens to public service frequencies to keep officials informed on the status of the incident. The Net Control Station should utilize a fairly experienced operator. Special training should be taken before attempting this position during a major activation. The best background for someone filling a Messenger's position is a good knowledge of traffic handling. You can expect to take messages that are destined to go out via radio, and to deliver messages that have arrived from the radio net. It is also your responsibility to put any originating messages into proper format before they are sent. A channel monitor listens to a public service frequency on behalf of the DEC/Shift Supervisor. You can expect to be briefed on the type of information to monitor as you start your shift. Generally anything that will help officials keep abreast of the event as it develops is of interest.

Shelter Operations

Staffing

Shelter operations, as with all locations, should be staffed by a minimum of two people; one to man the radio and the other to act as a runner. Ideally both will be operators so that they can provide relief for each other. Shelter operators need only be Technician class operators as all communications will be on 2-meters or 70cm.

Duties

The purpose of operators in the shelter(s) is to provide communications between the Shelter Manager and the organization in charge of the shelters, usually the Red Cross. Shelter operations may be on their own net depending on the scale of the incident.

Some of the communications may be lists of persons at the shelter, logistics requests or Welfare messages. Ideally these should be passed by digital stations.

Internal shelter communications should be accomplished by other means, i.e., simplex, Family Radio Service, etc.

Operators should avoid accepting duties or roles other than those associated with the function of ARES as this will hinder effective communications, our primary role.

However, it is useful if those assisting in Red Cross activities have taken the Red Cross Introduction to Disaster Services video course.

Types Of Communications

All shelter communications should be authorized by the Shelter Manager and should be in the form of a written message.

Local ARES groups should establish portable digital stations that can be set up for shelter communications. This provides some degree of confidentiality from the general public. Communications may include: • shelter head counts (not more than once per hour) • requests for material • specific food needed • specific equipment needed • specific medical supplies needed • request for specific personnel • Red Cross • medical • maintenance • other shelter workers, more importantly, provides written records. This is especially useful when dealing with welfare traffic.

Search & Rescue Operations

ARES members may be called upon to assist agencies conducting SAR operations. Many times these types of operations are conducted in remote areas, where communications on the agency's frequencies may be difficult due to lack of repeaters.

In most instances communications will be tactical in nature and a single net will be sufficient. In addition, simplex operations may be sufficient with the occasional use of a repeater to pass logistical requests. The NCS should choose the most appropriate modes.

Public Service Communications

Public service communications are communication services provided to **non-profit** organizations sponsoring a **public** event.

Public service communications are:

- normally scheduled
- do not require activation by an emergency management agency
- do not normally require coordination with multiple agencies

PRINCIPLES OF REPEATER OPERATION

1. Use minimum power. Otherwise, especially in heavily populated areas, you may run the risk of keying more than one repeater, thus causing unnecessary interference. Low power also conserves batteries.
2. Observe the "pause" procedure between exchanges. When it is your turn to transmit, after the transmitting station stands by, count to two or three before pressing your transmit switch.
3. Listen much, transmit little. Announce your presence on a repeater when you are certain of being able to assist in an emergency, and don't tie it up with idle chatter.
4. Monitor local ARES net frequency, when otherwise not busy.
5. Think before you talk. Anyone with an inexpensive public-service-band receiver can monitor. Stick to facts, control your emotions. Remember, during an emergency is the time when you are most apt to act and speak rashly.

6. Articulate, don't slur. Speak close to your mike, but talk across it, not into it. Keep your voice down. In an emergency situation one often gets excited and tends to shout. Talk slowly, calmly--this is the mark of an experienced communicator.

PRINCIPLES OF DISASTER COMMUNICATION

1. Keep the interference level down. In a disaster, crucial stations may be weak. All other stations should remain silent unless they are called upon. If you're not sure you should transmit, don't.
2. Monitor established disaster frequencies. Many ARES localities and some geographical areas have established disaster frequencies where someone is always (or nearly always) monitoring for possible calls.
3. Avoid spreading rumors. During and after a disaster situation, especially on the phone bands, you may hear almost anything. Unfortunately, much misinformation is transmitted. Rumors are started by expansion, deletion, amplification or modification of words, exaggeration or interpretation. All addressed transmissions should be officially authenticated as to their source. These transmissions should be repeated word for word, if at all, and only when specifically authorized.
4. Authenticate all messages. Every message which purports to be of an official nature should be written and signed. Whenever possible, amateurs should avoid initiating disaster or emergency traffic themselves. We do the communicating; the agency officials we serve supply the content of the communications.
5. Strive for efficiency. Whatever happens in an emergency, you will find hysteria and some amateurs who are activated by the thought that they must be sleepless heroes. Instead of operating your own station full time at the expense of your health and efficiency, it is much better to serve a shift at one of the best-located and best equipped stations, suitable for the work at hand, manned by relief shifts of the best-qualified operators. This reduces interference and secures well-operated stations.
6. Select the mode and band to suit the need. It is a characteristic of all amateurs to believe that their favorite mode and band is superior to all others. However, the merits of a particular band or mode in a communications emergency should be evaluated impartially with a view to the appropriate use of bands and modes. There is, of course, no alternative to using what happens to be available, but there are ways to optimize available communications.
7. Use all communications channels intelligently. While the prime object of emergency communications is to save lives and property (anything else is incidental), Amateur Radio is a secondary communications means; normal channels are primary and should be used if available. Emergency channels other than amateur which are available in the absence of amateur channels should be utilized without fear of favoritism in the interest of getting the message through. Use plain English no 10 codes or Q codes etc.
8. Don't "broadcast." Some stations in an emergency situation have a tendency to emulate "broadcast" techniques. While it is true that the general public may be listening, our transmissions are not and should not be made for that purpose.
9. **DO NOT EVER** use the names of people who are injured or deceased on the air!

GENERAL PHRASEOLOGY

What to say and how to say it on a controlled net. “TALKING ON A NET”

Please remember that when you are passing message traffic, the operator on the other end must write down exactly what you are saying. Speak slowly – pretend to write each word as you speak to insure the other operator has enough time to write it down. At the end of the message standby for the receiving operator to ask for any repeats that may be needed.

Identifiers and Conversation: Use your tactical call sign during conversation to conserve air time and to make things easier. Please remember to keep call signs and other qualifiers out from your identifiers. Net control will be known simply as “Control”. A shelter may be known by their one-word name, for example “Stroudsburg Shelter” rather than “Stroudsburg Junior High School shelter”. Always call by saying the identifier of the station you are calling first, then your identifier. So, for example, if you are Stroudsburg Shelter calling control you would say simply “Control, Stroudsburg Shelter”. If you are Net Control and you want to call Stroudsburg Shelter you would say “ Stroudsburg Shelter, Control”.

Answering: For all of you in the field, you should answer calls with just your tactical call sign. For example, if Control calls Stroudsburg Shelter, Stroudsburg Shelter should answer by saying simply “ Stroudsburg Shelter”. Note that excess baggage like “this is”, or “go ahead” are not really needed (although these two examples are short enough that they are not really a problem). But please try to avoid long strings like: “This is Stroudsburg Shelter, go ahead Net Control” (11 syllables!). Short and sweet should be the rule! Control answers calls the opposite way. Control always answers with the other station’s identifier. For example, if Stroudsburg Shelter calls Control, Control, answers by saying “ Stroudsburg Shelter”, not “Control”. Why? Because there is only one Control running the net, so answering with the identifier “Control” does not add much useful information. More importantly, Control needs to specify which station is being acknowledged. There may be more than one station trying to call Control at the same time, so if Control were to answer with just “Control” or “Go ahead” then all the stations who were trying to call would think that Net Control is talking to them. So Control answers with the stations identifier, which indicates clearly who is being invited to talk. This is common practice these days in public safety nets, and it is becoming more common in ham nets as well.

Acknowledging: The plain text radio acknowledgment to indicate that you have heard and understood is the word “copy”. For example if you are Stroudsburg Shelter and you are acknowledging that you have heard and understood, you should say simply “ Stroudsburg Shelter copies”. If you didn’t understand, just say “ Stroudsburg Shelter repeat”. You don’t need to give a long explanation like “Net Control this is Stroudsburg Shelter, I’m sorry, I wasn’t able to get your last transmission, I’m getting a lot of background noise here, could you repeat please?” (36 syllables)

Location: If Control asks for your ‘location’, you are probably being asked just to provide your general whereabouts so that Control can decide whether you are in position to be dispatched to an event. So you should give your general whereabouts without taking time to try to pinpoint your exact location. For example you might answer, “Tannersville” or “Camel Back Mountain” or perhaps “RT 611 in Bartonsville”. Your answer should make reference to major roads or landmarks that are likely to be recognized by Net Control. If you answer giving an

intersection of two tiny streets, then Control will probably not recognize them and will probably have to follow up with “Okay, and approximately where that is on the route?” If Control asks for your “exact location”, then Control is probably trying to help someone meet up with you. In this case go ahead and describe your location as precisely as you can.

Giving Information: Think before keying the mike, then say the fewest number of syllables that will get the information across. The biggest problem with many ham operational nets is verbosity of transmission. Verbosity is great on rag-chew nets, because that is what you are there for. But on an operations net it should be pruned as much as possible. . For example, if you want to take a restroom break, just say “I’ll be off the air for 5 minutes”. This is better than giving a lengthy discourse about how long it’s been since you had been to a restroom and so on. Another good example would be for a rest stop operator to say “The Stroudsburg Shelter is asking for 50 more cots if they are available” rather than a long explanation about how many cots they have now and how there has just been a flood of new arrivals in the past few minutes. Always make it short, and transfer only the information that the other station needs to be able to fulfill the request.

Amateur Call Signs: We are all proud of our calls, and when we are working the bands we let our call signs announce to the world who we are. However, for net communications your call sign serves no purpose other than to meet your legal requirement to identify. So please don’t clutter the net with 10 or 15 syllables of call sign as part of your identifier or at the end of every transmission. If you are pretty sure that you are finished talking for a while, then give your call sign at the end. But if you think from the context of the conversation that you will likely be talking again in just a few minutes, then leave your call out for now, and give it later when you are done. It doesn’t matter if you miss your opportunity to identify and Control starts talking with someone else. You can just wait for a lull in traffic and just say “WX3OES or (tactical call) and WX3OES”. Everyone should know that you are just IDing because you didn’t get an opportunity to do so before.

MC ARES/RACES Emergency Net

[If operating from the EOC use the WX3OES call sign, remember the FCC 10 Min ID Rules]

Preamble

“This is [Call Sign] calling the Monroe County Amateur Radio Emergency Service Net. This is NOT a drill. The purpose of this net is to coordinate emergency and back up communications as requested by [name of requesting agency] due to damages and communications disruptions caused by [state the event briefly]. [If using a repeater other than the WX3OES Repeater state the info for the repeater in use, if operating simplex say “operating simplex”] We are currently using the WX3OES repeater, 146.865 (PL100), maintained and owned by the Monroe County Office of Emergency Management. This is NOT a drill.”

“Is there any emergency or priority traffic? Any station with emergency or priority traffic, please call net control now.” *[Handle all emergency and priority traffic then proceed]*

“This is a directed net, during the net please direct all communications through net control. This net is open to all stations able to assist during this emergency. ARES/RACES membership is not required and all Amateurs are encouraged to check in and provide support.

“At this time, I’m looking for a backup net control station. Is there a Monroe County ARES/RACES station for back-up net control?” *[Wait a few seconds for a backup NCS to call, if no one is available continue without one]* **“I recognize [Call Sign] as my backup.”**

Check-ins

“I will now call for check-ins. To check-in, say the words "Net Control", un-key and let the repeater carrier drop, then continue by giving your call sign, name, and present location. When checking in notify net control if you have traffic. MCARES stations only, please check in at this time.” *[Handle this traffic then proceed]* **“I will now call for check-ins from any stations willing to assist”**

Recognition of Check-ins

“Net control recognizes” *[list all of the stations that checked in].* **“All stations that have checked in, please do not leave the net without notifying net control”**

Announcements

”Are there any operational announcements for the net? Please call net control.”

Recognize stations with announcements, giving them the opportunity to make their announcement.

[This step is OPTIONAL] **”Any station having a question, please call [Call Sign] net control now.”**
Recognize stations with questions call you, if there’s a question that you know the direct answer to answer the question, otherwise turn the net over to the RO/EC/AEC for an answer. If the RO/ EC/AEC isn’t on frequency, say “I don’t know at this time”. DO NOT speculate and do not allow general discussions. Keep the frequency as clear as possible.

Resource Collection

Call each MCARES station and ask if they are available to be deployed if needed, if the answer is no, ask them to serve as relay stations or other functions as needed. Call each non-MCARES station and ask if they are available to be deployed if needed, if the answer is no, ask them to serve as relay stations or other functions as needed. Record all information on the Resource Net Log.

Additional Check-ins

"I will now pause to recognize any additional check-ins. Any station who wishes to check in to the net, please call [Call Sign] net control now." [Recognize stations]. "Again all stations that have checked in, please do not leave the net without notifying net control"

Deployment

Deployment is to be done by the RO/EC/AEC or by the NCS as directed by the RO/EC/AEC.

Tactical Net

Start or switch to a tactical net when needed, in large scale events open an additional net on the secondary repeater if available.

Traffic Net

Start or switch to a traffic net when needed, in large scale events open an additional net on the secondary repeater if available.

Roll Call

Unless the net is handling traffic, conduct a roll call on the hour.

Maintain an ICS-214AR log of all check-ins and significant traffic. Don't do a roll call on the hour when an NCS hand-off has just taken place.

Net Control Hand-Off

"This is [Call Sign] I am looking for my replacement NCS. Is [call sign of replacement] ready to do a hand-off?"

The new NCS should already have the list of people checked in. Verify that he does. If not read off the list and be sure he has it. **"This is [Call Sign] I will now turn the net over to [incoming NCS call sign.]"**

Closing the Net

"I will now bring the net to a close. I want to thank all stations that helped out during this event. When I say your call sign please respond with your call sign and 'closing station'." [The NCS will then call all stations that checked in. When all stations have closed, the NCS will make the following announcement]

"Monroe County ARES/RACES would like to thank everyone who checked in to support this operational event, and also thank the Monroe County Office of Emergency Management for the use of the repeater. I will now return the repeater to normal use. This is [Call Sign] net control closing the net at ____ local time."

The NCS should maintain a log (ICS-214AR) and report this information to the Emergency Coordinator following the net.